



Air Pollution and its Impacts on Plant Growth

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PREFACE

Modern industrial society produces a large number of gases and particulate matter in sufficient quantities to harm human, animal and plant life. The amount of pollutants released in the atmosphere by fixed or mobile anthropogenic sources, is associated with economic activity. The progressive increase in urbanization in recent years, although has positive role in developmental process, but at the same time it imposes unending challenges, such as inadequate water supply, improper sanitation, and waste disposal, traffic congestion, environmental pollution and in general unsafe social environment.

Deterioration of air quality is a major environmental problem in many urban centers in both developed and developing countries. Root cause of urban air pollution is the continuous rise in vehicle population. Other causes are exponential growth of population, rapid proliferation of industries and technological development. Encroachments on roadside, mixed vehicles on roads, lack of smooth traffic flow, congested and narrow roads resulting in traffic jams are the main causes of air pollution. Urban air pollution is characterized by high concentration of suspended particulate matter, oxides of sulphur and nitrogen resulting primarily from increased use of vehicles.

Trees are immovable and are continuously exposed to pollutants in air and soil. They play an important role in maintaining ecological balance by actively participating in the cycling of nutrients, gases and air pollutants. Some trees are sensitive to pollution and act as bio-indicators of air pollution; hence it is more effective to see the impact of pollution on vegetation especially on roadside trees. Many trees are effective for trapping and absorbing air pollutants and act as sink to several air pollutants, hence trees play an important role in the improvement of urban air quality. Pollutants adversely affect plants with respect to their metabolic activities, which depend on the concentration of pollutants in the atmosphere, type of plant species, physiological stage and the season too. Plants improve air quality and thereby seem to be the suitable marker of air pollution and can be used to draw or edit air quality maps.

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Air Pollution and Its Impact on Plant Growth

Rapid urbanization and industrialization has led to continuous deterioration of air quality which is a major environmental problem in many urban centers in both the developed and developing countries. Air pollution is characterized by high concentration of suspended particulates matter, oxides of Sulphur and nitrogen primarily from increased use of vehicles. The book provided information on rational basis for air quality management and green belt development in urban areas.

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